

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) EP 0 817 103 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
07.01.1998 Bulletin 1998/02

(51) Int. Cl. 6: G06F 17/30

(21) Application number: 97304262.5

(22) Date of filing: 18.06.1997

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE

(30) Priority: 28.06.1996 US 671581

(71) Applicant:
SUN MICROSYSTEMS, INC.
Mountain View, CA 94043 (US)

(72) Inventor: Liu, James C.
Sunnyvale, California 94087 (US)

(74) Representative:
Harris, Ian Richard et al
D. Young & Co.,
21 New Fetter Lane
London EC4A 1DA (GB)

(54) System and method for on-line multimedia access

(57) Disclosed is a method and system for providing access to multimedia content on-line which is updated virtually simultaneously with the vendor's update process. By a user accessing a page on the World Wide Web, for example, data (encrypted and unencrypted) and instructions are automatically downloaded to a user's computer system for quick access. Depending upon the user's computer system (LAN or a stand-alone personal computer), "applets" containing data and instructions are stored for immediate access. In a Karaoke application of this invention, where the user desires to access songs which are most popular at a given time, the user accesses a page where a song list and other information is displayed on a display apparatus. When the user clicks on a particular song of the song list, the applet executes an authentication request. If the user is authenticated, the authentication is downloaded as part of the applet containing the desired multimedia content (or separately depending upon the circumstances). According to this invention, an applet includes multimedia elements which further include timing codes and a synchronization function which provides for the synchronization of the delivery of the multimedia elements.

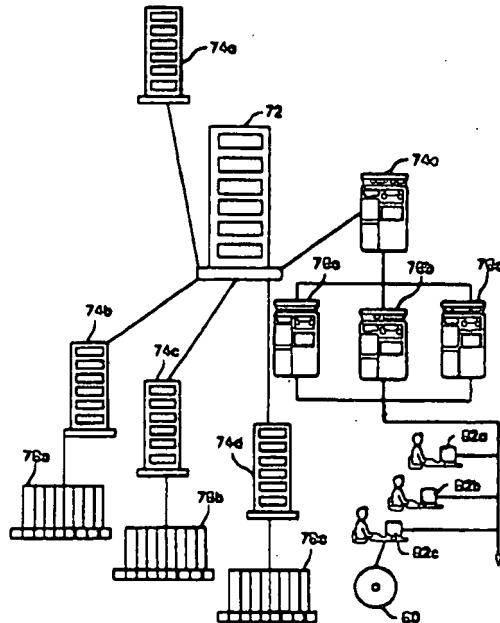


FIG. 1

EP 0 817 103 A2

Description

This invention relates to access to encrypted multi-media content data over an Internet-type distribution system.

Traditional forms of entertainment are becoming increasingly digitized and accessible to a wider audience. For example, in Japan, a popular form of entertainment, Karaoke, is available to a wider participating audience as a result of digitization. Because digitization reduces the cost of many products and services, Karaoke "juke boxes" are found in many business establishments so that their patrons may enjoy their use.

Digitized Karaoke juke boxes are an improvement over traditional juke boxes. Instead of replacing vinyl records, a service technician visiting each site simply loads software to update the song choices available to the user with the latest music. Moreover, on a display, words can be scrolled at the same time as the music plays. This multimedia Karaoke experience, while an improvement over traditional juke boxes, however, is expensive since it requires service calls by technicians for updating. Moreover, there is a lag between the release of a song and the time it is installed on a Karaoke juke box. Furthermore, the Karaoke song list books are printed on paper and thus are easily lost, damaged or destroyed. Additionally, in accounting, it is difficult to keep track of the songs which have been played so that royalties may be paid to the artists. A new method and apparatus which does not require visits by technicians to Karaoke sites and resolves the other problems described above would be beneficial.

While Karaoke is enjoyed by patrons of business establishments, home Karaoke participation is currently limited to playing and singing along with a record or CD. Some of the disadvantages to a home Karaoke participant include that he/she must leave home to purchase the music content and that he/she does not have the sing-along aid of scrolling words.

As more users access the Internet and the associated World-Wide-Web, more vendors are providing multimedia content data which is readily accessible by consumers. Depending upon the bandwidth capability of the transmission hardware, among other things, different types of content are accessible by consumers, including video, audio, graphic and ASCII data. Moreover, particularly with the advent of browser technology, such as Netscape, a user can readily access data from servers all over the world.

Recently, new programming languages have been developed which allows programs to be written which enhance browser technology. While not widely used yet, programs which are written in these languages can be embedded into a browser and promise to provide a user with a nearly seamless on-line multimedia experience. Such a language, Java (TM) language, has been developed by Sun Microsystems (R) Computer Corporation.

Java is an object-oriented language similar to C++

in many ways, but specifically developed to provide cross-platform capability and reduce the complexities of C++. Generally speaking, an object-oriented language facilitates the clear definition of interfaces and makes it possible to provide reusable "software ICs." Java provides multimedia capabilities which are operating system and hardware independent. The Java software architecture is designed to support platforms ranging from personal computers to embedded network devices of the type similar to a Java desktop device (recently announced by Sun and Oracle). Sun Microsystems has a Java homepage where the Java language specifications can be accessed among other instructive programming materials at [Http://JAVA.SUN.COM/doc/Overview/java/index.html](http://JAVA.SUN.COM/doc/Overview/java/index.html).

It would be beneficial to both commercial and home users for the distribution of Karaoke and other multimedia content to be provided on-line by an Internet-type distribution system.

Particular and preferred aspects of the invention are set out in the accompanying independent and dependent Claims. Features of the dependent Claims may be combined with those of the independent Claims as appropriate and in combinations other than those explicitly set out in the Claims.

A user of this invention is able to access multimedia content on-line which is updated virtually simultaneously with the vendor's update process. In the event that a vendor updates the data frequently, the user will benefit tremendously, never experiencing a lag between the newest content and the delivery thereof. By a user accessing a page on the World Wide Web, for example, data (encrypted and unencrypted) and instructions are automatically downloaded to a user's computer system for quick access. Depending upon the user's computer system (LAN or a stand-alone personal computer), "applets" containing data and instructions are stored for immediate access. An applet in and of itself may contain a plurality of components, and a single click by the user may generate a download which fetches a plurality of applets. In any case, the applets are available for virtually immediate execution, making the multimedia experience seamless to the user.

For example, in a Karaoke application of this invention, where the user desires to access songs which are most popular at a given time, the user is completely unaware of the automatic delivery of an applet including data and instructions from a main data base server. When the user accesses a page, a song list and other information is displayed on a display apparatus. When the user clicks on a particular song of the song list, the applet executes an authentication request. If the user is authenticated, the authentication is downloaded as part of the applet containing the desired multimedia content (or separately depending upon the circumstances). In the meantime, a new song may have reached number one standing in the charts, and the vendor has updated the main data base accordingly. While the user is still on

the page, an applet containing a new song list is downloaded to user's computer system, so that in the near future, when the user goes to click another song for playing, the song list is updated and includes the newest and most popular songs.

A multimedia experience, inherent in its nature, will include different types of media content. For a seamless experience, each element's timing must be coordinated with the other elements' timing. According to this invention, an applet includes multimedia elements which further include timing codes and a synchronization function which provides for the synchronization of the delivery of the multimedia elements.

Exemplary embodiments of the invention are described hereinafter, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is an overview of a distribution system used in conjunction with this invention;

Figure 2 shows display screen output, among other things, offering a user song choices for a Karaoke application of this invention;

Figure 3 is a flow chart of choices provided to a user in a Karaoke application;

Figure 4 is a flow chart illustrating the threads for delivery of the different multimedia content components;

Figure 5 is a diagram illustrating the embedded nature of Java in a browser;

Figure 6 is a flow chart illustration an authentication procedure of this invention;

Figure 7 is a flow chart illustrating an chose and play sequence of this invention;

Figure 8 is a flow chart illustrating a method of synchronization of multimedia elements;

Figure 9 is a flow chart illustrating another method of synchronization of multimedia elements; and

Figure 10 is a flow chart illustrating yet another method of synchronization of multimedia elements according to this invention.

A user wishing to access a Karaoke application provided in accordance with this invention will access a Karaoke page via a browser such as Netscape. The browser supports Java so that the use of Java provides multimedia capabilities which are operating system and hardware independent. Accordingly, an applet including encrypted and unencrypted data and instructions will be delivered to the user's computer system to enable the user to make choices and thus send a request to a remote server for the delivery of multimedia content. Once authentication has taken place, one or more applets are sent by the remote server which deliver the multimedia content.

Applets are stored in a network of servers for efficient delivery to a user. FIG. 1 shows a main database 72 in communication with caching subservers 74a, 74b, 74c, 74d and 74e. The main server defines the master

database of all songs released. This database can rely on any known database technology whose hardware will usually reside at the central distribution site for data defined by the implementor. Multiple main servers are permitted for redundancy.

Caching subservers define a location specific server which caches songs for distribution to local Karaoke clients. The purpose of the caching subservers is to reduce load on the main server generated by song requests, and reduce long distance network traffic to the main server by caching songs locally. If a caching server does not have in memory, a song, it will request it from the master list. Subserver 74e is further shown in communication with subservers 76a, 76b and 76c. Networked computers may be arranged in other configurations as well.

An array of dedicated Karaoke terminals 78a, 78b and 78c are in communication with subservers 74b, 74c and 74d respectively. The Karaoke terminal plays the songs but also may include, but is not required to have digital signal processing capability, stereo sound, remote control, a keyboard and a mouse. Alternatively, the Karaoke page is accessed, for example, by a user's personal computer, LAN, laptop, PDA, workstation, television or telephone 82a, 82b or 82c, wireless or wired. In any manner of transmission from a remote source, applets are automatically downloaded onto the user's computer system upon access to the page as described above.

Turning to FIG. 2, an example of a Karaoke page 10 on a display apparatus is shown. The user will view a song list 12 such as that shown on the left side of page 10. While the user scrolls the song list, various information is provided. For example, a song's standing in the charts at that particular time, its length and any other information pertinent to the song is optionally provided. Because a song's current standing in the charts is information which can change at any given moment, such information when available is automatically downloaded to the user while the user maintains access to the page. New songs which are released may also be downloaded to the user while the user maintains access to the page. Moreover, as the user is scrolling through the song list, still photographs or video clips of the performances by the artists are also provided.

The user will use the click of a mouse, or other input device, to choose a song 14 on the song list 12. As shown in FIG. 2, a user chose the song *Boy Meets Girl* by TRF. To the right side of the song list on the page, graphics, animation or a video 16 by the group TRF are shown. As the song plays, the words to the song are also displayed. As shown in FIG. 2, the words are "Woo woo woo wo, BOY MEETS GIRL."

As the song continues to play and new verses are sung by the performer, the words displayed will change. Words (ASCII data) 18 may be displayed, for example, in segments or one at a time. In either event, the words displayed are synchronized with the words sung by the

performer. In the case where a segment of words is displayed, the words on the screen are simultaneously highlighted against the background 22. Highlighting may instead be provided, for example, in a traditional bouncing ball format. An applet delivering multimedia content in accordance with this invention therefore includes the multimedia content data as well as instructions for providing the synchronization of different multimedia elements as will be described in detail below with reference to FIGS. 8-10.

The initial applet or applets delivered to the user may provide a number of choices to the user. The flowchart of FIG. 3 shows steps to carry out a selection process provided by the initially delivered applet or applets. When the user accesses a Web page 10 at box 30, he/she may make a choice from ASCII song list 14 at box 32. As mentioned above, components such as graphics, video and audio may also be delivered by an initial applet at box 34. Thus, as the song list scrolls at box 34, graphics, video, audio cuts from the songs or ASCII data such as a song's current standing may be accessed at boxes 36 and 38. Having decided upon a song, the user clicks to indicate his/her choice at box 42. User options include whether the song should be played with or without vocals at box 44; whether to raise or lower the key at box 46; a record of the number of times the song has been played by the user at box 48; whether to display video or graphics by the artist for an additional fee at box 52; whether to abort choice at box 54. Alternatively, the choices between boxes 44-54 may be suppressed or not offered. The selection is played at box 56. Once concluded, at box 58 the choice of whether to continue or to end is provided at boxes 62 and 64 respectively. Moreover, one of the above described user option boxes can include other features, such as to chose the language in which the vocalization is sung, for example, English or Japanese; whether the voice is female or male, tenor, alto or soprano; whether the voice is to sing a harmony with the original base melody; or whether to change the tempo or style of the song, for example, to a rap version, a easy listening version or country version.

After an initial applet is delivered, the multimedia content is delivered upon request, providing that the user has been authenticated. Turning to the flow chart of FIG. 4, when the user clicks on a home page with the browser, a server delivers the most current applet at boxes 84 and 86. After the song selection at box 42 (see FIG. 3) the applet calls back to the database (stored on main server 72 or a subserver) to request audio, video, timing and lyric information at box 88. At box 92, to deliver the content in a synchronized manner, the applet forks threads of control to fetch various data as shown in the next boxes, 94, 96, 98, 102 and 104. At box 106, when the data is delivered to the user's computer system, it is assembled and played.

Since the delivered content data is encrypted, a key is needed for a user to decrypt it. The key may have

been delivered with the initial applet or later. In any event, the key will not be provided to the user until the user has been authenticated. Authentication, for example, includes verifying payment data, a user password or a handshake with a form of personal identification such as a PCMCIA-based card, for example, a credit, debit, prepaid cash card or smart card.

FIG. 6 is a flowchart of the authentication thread 104 of FIG. 5. The authentication of this invention includes cryptographic portion and security access portions that control permissions for users to access songs, registration of usage of songs, data encryption of digital data, and valid usage lifetime of encrypted data (cl. <http://www.omg.org> follow links to security API for CORBA). That is, after an initial applet is delivered, and a user makes a choice and a request at box 108, authentication may be delivered before, at the same time or after the multimedia content elements are delivered depending on, for example, where particular threads of the applet shown in FIG. 4 are stored. Encrypted data is downloaded to the user at box 114 and stored on the user's computer system.

Upon authentication, a key is provided to the user to decrypt the multimedia content data so that the song plays at box 118. Depending upon the Karaoke business operation, the key may be disposable and therefore expire immediately upon decrypting the data, or may expire after a predetermined number of plays or within a time period such as twenty-four hours at box 122. With the ease of delivery of applets, a plurality of keys may be downloaded to a user's computer system in a manner invisible to the user. Moreover, as disposable keys are used, replacement keys are sent to the user's computer system for use later during the session. Once the user logs off page 10 at box 126, applets are removed from the user's computer system's memory. In this manner, piracy of content is particularly difficult since one key will decrypt encrypted data for one song which can expire after one play. Accordingly, access is more secure and thus multimedia content is better protected.

As mentioned above, Applets may be updated by the vendor and then automatically downloaded at any given time by the server. Turning to FIG. 6, an overview of particular elements of an applet is shown. As discussed above, Java applets 108 are embedded in the browser 112. The applet elements include data 114 and instructions 116 (functionality) which acts upon the data. The data is either unencrypted or encrypted data, the latter of course needing a key for the user's access.

The functionality 116 is provided by a set of instructions operating on applet data 114. Digital signal processing (DSP) functionality includes features shown in FIG. 3 used to lower or raise the song's key (box 46), to choose a song with or without vocals (box 44) or to slow or speed the song's tempo. Compression of data (and therefore its decompression) is also provided by the functionality of the applet. Where the data has been

stored in, for example, a MIDI format (see FIG. 10), decompression instructions are an applet component. The authentication process as well as the associated activation of keys are also functionalities provided by the applet.

The functionality 116 instructions also act as an interface 118 to provide access to the server via common object request broker architecture (CORBA) (cf. <http://www.omg.org>). This is the open standard by which authentication and messaging between a Karaoke terminal and any server will communicate. When a song selection is made by the user, instructions 116 makes a request of the server. In responding, the system is able to keep track of how many times a particular song was requested. In this way, the vendor is able to keep track of the royalties due to the artist, the market demographics by region and thus age and income level so that pricing structures can better reflect the actual playing of the song. The interface with the server 118 can cause prompts for the user at the graphical user interface (GUI) 122. Moreover, once a user has accessed the page 10 and applets are being downloaded, the interface 118 can signal to bring in more applets at appropriate times, for example, to offer coupons for goods or services which can be printed on the user's printer or electronically stored for use on-line or to make other offers such as concert tickets or entries into contests. In this manner data request box 124 makes the request to the server so that another applet is subsequently downloaded on the user's system to satisfy the request.

Depending upon the circumstances, a user will either request a song or request a series of songs. Turning to FIG. 7, a flow chart is shown providing for the simultaneous play and search capability of this invention. The song list 12 (see FIG. 2) is reviewed by the user and the user makes a song selection at box 126. A prompt for the next song selection is provided at box 128. The user may make the selection to que the song at box 132. If the user chooses not to make the next selection, the chosen song plays or continues to play at box 134. While the song continues to play, the selection prompt is still available to the user so that he/she may make the next song choice before the first song is over or at its completion at box 136. In the event the first song is still playing, the next song is put into a song que at box 132. In the event that the first song is completed and no other song choices are made, then the program is complete at box 138. This process, as shown in FIG. 7, can be repeated so that a user can que an entire song repertoire before the activation of the first play or while the play is proceeding. In the meantime, as discussed above, the vendor may have updated the song list and new applets are being downloaded to the user's system so that song choices are updated in a seamless manner.

As discussed above with reference to FIG. 4, this invention includes instructions to generate multimedia

content output including audio output from an audio data element, ASCII output from an ASCII data element and graphics output from a graphics data element, wherein the ASCII output and the graphics output are displayed on a display apparatus, the combination of which is delivered in a synchronized manner with the audio output in accordance with a timing data element. Also as mentioned above, the Karaoke applets run inside a browser, providing for the user selection of a song, downloads audio, downloads the video images, downloads the ASCII lyrics and downloads the timing data. Each download occurs using a separate thread of control for asynchronicity and better bandwidth usage. Pressing the "play" button causes the song to play. Pressing the "stop" button halts the play. Each time play is pressed, timing resynchronization with the words occurs. This invention can support multiple types of timing synchronization providing varying qualities of service. Below, three types are discussed.

Referring to FIG. 8, play is input by the user at box 142. A check is made that all the audio, video, lyrics and time data are loaded at box 144. The audio data include any form of digital audio data, such as .au, .snd, .aiff, etc. file formats. Audio data also includes MIDI format audio, and any compression of the audio. The video data include picture based formats (.gif, .jpg, etc.) and any other motion picture format data such as mpeg and .avi. The timing data defines the list of times that are associated with the vocalization of words within a song. The text data in both single-byte and double-byte (internationalized and localized fonts) of the words to a song.

When a song begins to play, the start time is $t=0$ and the increment number is $n=0$ at box 146. The increment number is equal to the ASCII line number. An additional variable, x , represents the graphical output for highlighting and is linear with t and n . At this time, the audio, video and lyrics begin to playback on separate threads of control at box 148. A computation is then made to compute the beginning and the ending time (ΔT) of the highlight for an ASCII line associated with n at box 152 so that the highlight of a line of lyrics is simultaneously provided in a manner linearly proportional to ΔT at box 154. To move onto the next line number, increment line number ($n++$) at box 156. For each line n highlighted, a data block of audio n is played. After a sufficient number of increments of n , the system asks whether the song is done at box 158. If it is, the play stops at box 162. If the song is not done, it loops back to box 152. Alternatively, if stop had been pressed at any time at box 164, the audio and video would stop at box 166.

Where it is possible to fragment the audio ASCII and graphical highlighting into pieces, synchronization between lyric highlighting and the words playing is better enabled. The increment number n counts the data fragments. The data is fragmented into equal sized data blocks, each having a delivery time equal to T . Turning to FIG. 9, in this way, at box 172, one line of lyrics is

fragmented so that it is in sync with one piece of the audio component (delta T) so that the synchronization of the two takes effect for that particular delta T. Additionally, the graphical output x is also fragmented to match word for word the audio output with the ASCII output. At box 174, the content is delivered accordingly. At box 176, the line is incremented by one fragment and the process returns to box 172 until the song is completed. In this way, if there is a defect in the data producing the equivalent of a skip in the music, then the timing will still be resynchronized at the next t=0.

Where the MIDI standard is incorporated into the timing process of this invention as shown in FIG. 10, at box 178 the system checks that all the MIDI audio, video, lyrics and graphics are loaded (no separate timing data thread is needed). The process begins at t=0 and n=0 at box 179 where n is defined by the MIDI standard. At box 182, the MIDI audio is played and the time of execution is retrieved from MIDI API at box 184. Accordingly, the proper word of proper line to highlight is computed by MIDI algorithms at box 186. If the song is done, the system ends the procedure. If not, the system loops back to box 182.

Accordingly, a seamless multimedia experience is provided in that each elements' timing is coordinated with the other elements' timing. According to this invention, an applet can include multimedia elements which include timing codes or the data can be configured as per a standard like MIDI for the synchronized delivery of the multimedia elements. Applications for this invention include noise dependent games (such as mechanical, such as panchiko or video games, such as Pacman or SkyBlaster) or customizable games, where the visual aspects of the game must be synchronized with the visual components to resemble mechanical variations of the game. For example, the visual components of the game panchiko include metal balls which move in a vertical fashion, their clanking representable by synchronized audio components. In such a case the variables discussed in reference to FIG. 9 would include audio, visual and ASCII as well which is preprogrammed to represent output based on a user's input (game playing). Moreover, other gambling games such as slot machines may be implemented in accordance with this invention where the mechanical operation is visual component and the associated mechanical noises are the audio components. The ASCII data is in the form, for example, of winnings which could be applied as a credit to one's credit card or PCMCIA-based card.

Server systems and subsystems incorporating features of this invention can be implemented entirely in hardware, or in a combination of hardware and software (i.e., program modules stored in memory). For example, the browser embedded component or applet can be implemented entirely in software. Suitable media for server software include, for example, magnetic media 80 (See FIG. 1) (e.g., disks and tapes), optical media (e.g., CD-ROMs), DRAMs and SRAMs. In addition, soft-

ware can either be pre-loaded into the server system or loaded by the user electronically with or without the use of tangible storage media, e.g., by downloading program modules to the user's server from ftp/telnet or html sites on the Internet or WorldWide Web, respectively.

Thus, program modules incorporating features of the invention can be conveniently distributed by CD-ROM, for example, or by accessing a Web site. In the latter case, the modules are typically loaded temporarily from permanent storage into RAM and/or output buffers of the Web server; i.e., these are the media serving to store and distribute the program modules of the invention whenever a download request is made. After loading into RAM, the Web server transmits the program modules to the user's host.

Claims

1. A system for providing on-line multimedia content output to a user on said user's computer system, comprising:

20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000 1005 1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290 1295 1300 1305 1310 1315 1320 1325 1330 1335 1340 1345 1350 1355 1360 1365 1370 1375 1380 1385 1390 1395 1400 1405 1410 1415 1420 1425 1430 1435 1440 1445 1450 1455 1460 1465 1470 1475 1480 1485 1490 1495 1500 1505 1510 1515 1520 1525 1530 1535 1540 1545 1550 1555 1560 1565 1570 1575 1580 1585 1590 1595 1600 1605 1610 1615 1620 1625 1630 1635 1640 1645 1650 1655 1660 1665 1670 1675 1680 1685 1690 1695 1700 1705 1710 1715 1720 1725 1730 1735 1740 1745 1750 1755 1760 1765 1770 1775 1780 1785 1790 1795 1800 1805 1810 1815 1820 1825 1830 1835 1840 1845 1850 1855 1860 1865 1870 1875 1880 1885 1890 1895 1900 1905 1910 1915 1920 1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070 2075 2080 2085 2090 2095 2100 2105 2110 2115 2120 2125 2130 2135 2140 2145 2150 2155 2160 2165 2170 2175 2180 2185 2190 2195 2200 2205 2210 2215 2220 2225 2230 2235 2240 2245 2250 2255 2260 2265 2270 2275 2280 2285 2290 2295 2300 2305 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 2420 2425 2430 2435 2440 2445 2450 2455 2460 2465 2470 2475 2480 2485 2490 2495 2500 2505 2510 2515 2520 2525 2530 2535 2540 2545 2550 2555 2560 2565 2570 2575 2580 2585 2590 2595 2600 2605 2610 2615 2620 2625 2630 2635 2640 2645 2650 2655 2660 2665 2670 2675 2680 2685 2690 2695 2700 2705 2710 2715 2720 2725 2730 2735 2740 2745 2750 2755 2760 2765 2770 2775 2780 2785 2790 2795 2800 2805 2810 2815 2820 2825 2830 2835 2840 2845 2850 2855 2860 2865 2870 2875 2880 2885 2890 2895 2900 2905 2910 2915 2920 2925 2930 2935 2940 2945 2950 2955 2960 2965 2970 2975 2980 2985 2990 2995 3000 3005 3010 3015 3020 3025 3030 3035 3040 3045 3050 3055 3060 3065 3070 3075 3080 3085 3090 3095 3100 3105 3110 3115 3120 3125 3130 3135 3140 3145 3150 3155 3160 3165 3170 3175 3180 3185 3190 3195 3200 3205 3210 3215 3220 3225 3230 3235 3240 3245 3250 3255 3260 3265 3270 3275 3280 3285 3290 3295 3300 3305 3310 3315 3320 3325 3330 3335 3340 3345 3350 3355 3360 3365 3370 3375 3380 3385 3390 3395 3400 3405 3410 3415 3420 3425 3430 3435 3440 3445 3450 3455 3460 3465 3470 3475 3480 3485 3490 3495 3500 3505 3510 3515 3520 3525 3530 3535 3540 3545 3550 3555 3560 3565 3570 3575 3580 3585 3590 3595 3600 3605 3610 3615 3620 3625 3630 3635 3640 3645 3650 3655 3660 3665 3670 3675 3680 3685 3690 3695 3700 3705 3710 3715 3720 3725 3730 3735 3740 3745 3750 3755 3760 3765 3770 3775 3780 3785 3790 3795 3800 3805 3810 3815 3820 3825 3830 3835 3840 3845 3850 3855 3860 3865 3870 3875 3880 3885 3890 3895 3900 3905 3910 3915 3920 3925 3930 3935 3940 3945 3950 3955 3960 3965 3970 3975 3980 3985 3990 3995 4000 4005 4010 4015 4020 4025 4030 4035 4040 4045 4050 4055 4060 4065 4070 4075 4080 4085 4090 4095 4100 4105 4110 4115 4120 4125 4130 4135 4140 4145 4150 4155 4160 4165 4170 4175 4180 4185 4190 4195 4200 4205 4210 4215 4220 4225 4230 4235 4240 4245 4250 4255 4260 4265 4270 4275 4280 4285 4290 4295 4300 4305 4310 4315 4320 4325 4330 4335 4340 4345 4350 4355 4360 4365 4370 4375 4380 4385 4390 4395 4400 4405 4410 4415 4420 4425 4430 4435 4440 4445 4450 4455 4460 4465 4470 4475 4480 4485 4490 4495 4500 4505 4510 4515 4520 4525 4530 4535 4540 4545 4550 4555 4560 4565 4570 4575 4580 4585 4590 4595 4600 4605 4610 4615 4620 4625 4630 4635 4640 4645 4650 4655 4660 4665 4670 4675 4680 4685 4690 4695 4700 4705 4710 4715 4720 4725 4730 4735 4740 4745 4750 4755 4760 4765 4770 4775 4780 4785 4790 4795 4800 4805 4810 4815 4820 4825 4830 4835 4840 4845 4850 4855 4860 4865 4870 4875 4880 4885 4890 4895 4900 4905 4910 4915 4920 4925 4930 4935 4940 4945 4950 4955 4960 4965 4970 4975 4980 4985 4990 4995 5000 5005 5010 5015 5020 5025 5030 5035 5040 5045 5050 5055 5060 5065 5070 5075 5080 5085 5090 5095 5100 5105 5110 5115 5120 5125 5130 5135 5140 5145 5150 5155 5160 5165 5170 5175 5180 5185 5190 5195 5200 5205 5210 5215 5220 5225 5230 5235 5240 5245 5250 5255 5260 5265 5270 5275 5280 5285 5290 5295 5300 5305 5310 5315 5320 5325 5330 5335 5340 5345 5350 5355 5360 5365 5370 5375 5380 5385 5390 5395 5400 5405 5410 5415 5420 5425 5430 5435 5440 5445 5450 5455 5460 5465 5470 5475 5480 5485 5490 5495 5500 5505 5510 5515 5520 5525 5530 5535 5540 5545 5550 5555 5560 5565 5570 5575 5580 5585 5590 5595 5600 5605 5610 5615 5620 5625 5630 5635 5640 5645 5650 5655 5660 5665 5670 5675 5680 5685 5690 5695 5700 5705 5710 5715 5720 5725 5730 5735 5740 5745 5750 5755 5760 5765 5770 5775 5780 5785 5790 5795 5800 5805 5810 5815 5820 5825 5830 5835 5840 5845 5850 5855 5860 5865 5870 5875 5880 5885 5890 5895 5900 5905 5910 5915 5920 5925 5930 5935 5940 5945 5950 5955 5960 5965 5970 5975 5980 5985 5990 5995 6000 6005 6010 6015 6020 6025 6030 6035 6040 6045 6050 6055 6060 6065 6070 6075 6080 6085 6090 6095 6100 6105 6110 6115 6120 6125 6130 6135 6140 6145 6150 6155 6160 6165 6170 6175 6180 6185 6190 6195 6200 6205 6210 6215 6220 6225 6230 6235 6240 6245 6250 6255 6260 6265 6270 6275 6280 6285 6290 6295 6300 6305 6310 6315 6320 6325 6330 6335 6340 6345 6350 6355 6360 6365 6370 6375 6380 6385 6390 6395 6400 6405 6410 6415 6420 6425 6430 6435 6440 6445 6450 6455 6460 6465 6470 6475 6480 6485 6490 6495 6500 6505 6510 6515 6520 6525 6530 6535 6540 6545 6550 6555 6560 6565 6570 6575 6580 6585 6590 6595 6600 6605 6610 6615 6620 6625 6630 6635 6640 6645 6650 6655 6660 6665 6670 6675 6680 6685 6690 6695 6700 6705 6710 6715 6720 6725 6730 6735 6740 6745 6750 6755 6760 6765 6770 6775 6780 6785 6790 6795 6800 6805 6810 6815 6820 6825 6830 6835 6840 6845 6850 6855 6860 6865 6870 6875 6880 6885 6890 6895 6900 6905 6910 6915 6920 6925 6930 6935 6940 6945 6950 6955 6960 6965 6970 6975 6980 6985 6990 6995 7000 7005 7010 7015 7020 7025 7030 7035 7040 7045 7050 7055 7060 7065 7070 7075 7080 7085 7090 7095 7100 7105 7110 7115 7120 7125 7130 7135 7140 7145 7150 7155 7160 7165 7170 7175 7180 7185 7190 7195 7200 7205 7210 7215 7220 7225 7230 7235 7240 7245 7250 7255 7260 7265 7270 7275 7280 7285 7290 7295 7300 7305 7310 7315 7320 7325 7330 7335 7340 7345 7350 7355 7360 7365 7370 7375 7380 7385 7390 7395 7400 7405 7410 7415 7420 7425 7430 7435 7440 7445 7450 7455 7460 7465 7470 7475 7480 7485 7490 7495 7500 7505 7510 7515 7520 7525 7530 7535 7540 7545 7550 7555 7560 7565 7570 7575 7580 7585 7590 7595 7600 7605 7610 7615 7620 7625 7630 7635 7640 7645 7650 7655 7660 7665 7670 7675 7680 7685 7690 7695 7700 7705 7710 7715 7720 7725 7730 7735 7740 7745 7750 7755 7760 7765 7770 7775 7780 7785 7790 7795 7800 7805 7810 7815 7820 7825 7830 7835 7840 7845 7850 7855 7860 7865 7870 7875 7880 7885 7890 7895 7900 7905 7910 7915 7920 7925 7930 7935 7940 7945 7950 7955 7960 7965 7970 7975 7980 7985 7990 7995 8000 8005 8010 8015 8020 8025 8030 8035 8040 8045 8050 8055 8060 8065 8070 8075 8080 8085 8090 8095 8100 8105 8110 8115 8120 8125 8130 8135 8140 8145 8150 8155 8160 8165 8170 8175 8180 8185 8190 8195 8200 8205 8210 8215 8220 8225 8230 8235 8240 8245 8250 8255 8260 8265 8270 8275 8280 8285 8290 8295 8300 8305 8310 8315 8320 8325 8330 8335 8340 8345 8350 8355 8360 8365 8370 8375 8380 8385 8390 8395 8400 8405 8410 8415 8420 8425 8430 8435 8440 8445 8450 8455 8460 8465 8470 8475 8480 8485 8490 8495 8500 8505 8510 8515 8520 8525 8530 8535 8540 8545 8550 8555 8560 8565 8570 8575 8580 8585 8590 8595 8600 8605 8610 8615 8620 8625 8630 8635 8640 8645 8650 8655 8660 8665 8670 8675 8680 8685 8690 8695 8700 8705 8710 8715 8720 8725 8730 8735 8740 8745 8750 8755 8760 8765 8770 8775 8780 8785 8790 8795 8800 8805 8810 8815 8820 8825 8830 8835 8840 8845 8850 8855 8860 8865 8870 8875 8880 8885 8890 8895 8900 8905 8910 8915 8920 8925 8930 8935 8940 8945 8950 8955 8960 8965 8970 8975 8980 8985 8990 8995 9000 9005 9010 9015 9020 9025 9030 9035 9040 9045 9050 9055 9060 9065 9070 9075 9080 9085 9090 9095 9100 9105 9110 9115 9120 9125 9130 9135 9140 9145 9150 9155 9160 9165 9170 9175 9180 9185 9190 9195 9200 9205 9210 9215 9220 9225 9230 9235 9240 9245 9250 9255 9260 9265 9270 9275 9280 9285 9290 9295 9300 9305 9310 9315 9320 9325 9330 9335 9340 9345 9350 9355 9360 9365 9370 9375 9380 9385 9390 9395 9400 9405 9410 9415 9420 9425 9430 9435 9440 9445 9450 9455 9460 9465 9470 9475 9480 9485 9490 9495 9500 9505 9510 9515 9520 9525 9530 9535 9540 9545 9550 9555 9560 9565 9570 9575 9580 9585 9590 9595 9600 9605 9610 9615 9620 9625 9630 9635 9640 9645 9650 9655 9660 9665 9670 9675 9680 9685 9690 9695 9700 9705 9710 9715 9720 9725 9730 9735 9740 9745 9750 9755 9760 9765 9770 9775 9780 9785 9790 9795 9800 9805 9810 9815 9820 9825 9830 9835 9840 9845 9850 9855 9860 9865 9870 9875 9880 9885 9890 9895 9900 9905 9910 9915 9920 9925 9930 9935 9940 9945 9950 9955 9960 9965 9970 9975 9980 9985 9990 9995 10000 10005 10010 10015 10020 10025 10030 10035 10040 10045 10050 10055 10060 10065 10070 10075 10080 10085 10090 10095 10100 10105 10110 10115 10120 10125 10130 10135 10140 10145 10150 10155 10160 10165 10170 10175 10180 10185 10190 10195 10200 10205 10210 10215 10220 10225 10230 10235 10240 10245 10250 10255 10260 10265 10270 10275 10280 10285 10290 10295 10300 10305 10310 10315 1032

in accordance with said timing element.

6. A system as recited in Claim 1 wherein said graphics output is in the form of a pachinko game having metal balls which is displayed on said display apparatus.

7. A system as recited in Claim 6 wherein said audio output is resembles the sound of metals balls clanging, such audio output delivered in a synchronized manner with said graphics output in accordance with said timing element.

8. A system as recited in Claim 1 wherein said at least one component includes encrypted data and unencrypted data and authentication instructions executable with respect thereto, said system further including:

- a display unit configured to display unencrypted data in a manner which enables said user to make a multimedia content output choice; 20
- an output unit configured to generate on said display unit a representation of unencrypted data in a manner which enables a user to make a multimedia content choice and an authentication request; 25
- a processor configured to generate a multimedia content output choice and an authentication request; 30
- an execution unit configured to execute said request for authentication in order to provide a key to decrypt some of said encrypted data to generate multimedia content output therefrom; 35
- a receiver configured to receive said authentication; and
- a processor configured to generate multimedia content output.

9. A system as recited in Claim 1 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length, said system further comprising:

- a generator configured to generate simultaneous output of audio fragments and text fragments at the beginning of said delta time. 50

10. A system as recited in Claim 1 wherein said component is an applet.

11. A system as recited in Claim 1 wherein said text output further includes a list of songs from which a user can choose, and wherein said execution unit is further configured to allow said user to choose

5 songs from said list so that said delivery of said songs' multimedia data elements is queued for sequential delivery.

12. A method for providing on-line multimedia content output to a user on said user's computer system, comprising the steps of:

- via a browser, providing access to a page and at least one component wherein said at least one component has a plurality of elements including multimedia audio, graphics, text and timing data elements and wherein said component further includes instructions which when executed synchronize the delivery of said multimedia content data elements to said user's computer system;
- automatically downloading said at least one component to said user's computer system; and
- executing said instructions to generate multimedia content output including audio output from said audio data element in the form of a song having words, text output from said text data element being displayed on a display apparatus and graphics output from said graphics data element being displayed on said display apparatus in the form of highlights on said text in a synchronized manner with said audio output in accordance with said timing data element.

13. A method as recited in Claim 12 wherein said at least one component includes encrypted data and unencrypted data and authentication instructions executable with respect thereto, said prior to said executing step, method further including the steps of:

- displaying unencrypted data in a manner which enables said user to make a multimedia content output choice;
- generating on said display apparatus a representation of unencrypted data in a manner which enables a user to make a multimedia content choice and an authentication request;
- generating a multimedia content output choice and an authentication request;
- executing said request for authentication in order to provide a key to decrypt some of said encrypted data to generate multimedia content output therefrom;
- receiving said authentication; and
- generating multimedia content output.

14. A method as recited in Claim 12 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text

data element is fragmented into text fragments having delta time in length, said method further comprising the step of:

simultaneously outputting said audio fragments and text fragments at the beginning of said delta time. 5

15. A method as recited in Claim 12 wherein said text output is in the form of ASCII words. 10

16. A method as recited in Claim 12 wherein said text output is in the form of Japanese characters.

17. A browser embedded component, comprising: 15

multimedia audio, graphics, text and timing data elements;

instructions which when executed synchronize the delivery of said multimedia data elements; and

an execution element configured to execute said instructions to generate multimedia content output including audio output from said audio data element, text output from said text data element and graphics output from said graphics data element, said text output and said graphics output being configured for display on a display apparatus, the combination of which being delivered in a synchronized manner with said audio output in accordance with said timing data element. 25

18. An embedded component as recited in Claim 17 wherein said audio output when generated is in the form of a song having words. 35

19. An embedded component as recited in Claim 17 wherein said text output when executed is in the form of ASCII words. 40

20. An embedded component as recited in Claim 17 wherein said text output is in the form of Japanese characters.

21. An embedded component as recited in Claim 17 wherein said graphics output when executed is in the form of highlights on said text output which are configured to be displayed on a display apparatus in a synchronized manner with said audio output words in accordance with said timing element. 50

22. An embedded component as recited in Claim 17 wherein said graphics output when executed is in the form of a pachinko game having metal balls which is configured to be displayed on a display apparatus. 55

23. An embedded component as recited in Claim 17 wherein said audio output when executed resembles the sound of metals balls clanging, such audio output delivered in a synchronized manner with said graphics output in accordance with said timing element.

24. An embedded component as recited in Claim 17 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length, said component further comprising:

an execution unit configured to provide the simultaneous output of audio fragments and text fragments at the beginning of said delta time.

25. A method for providing to a user, on said user's computer system, on-line access to multimedia content, comprising the steps of: 20

via a browser, providing access to a page containing at least one component wherein said at least one component includes encrypted and unencrypted data and instructions executable with respect thereto;

automatically downloading said at least one component to said user's computer system;

displaying on a display apparatus a representation of unencrypted data in a manner which enables a user to make a multimedia content output choice;

generating a multimedia content output choice and an authentication request;

said instructions executing said request for authentication in order to provide a key to decrypt some of said encrypted data to generate multimedia content output therefrom;

receiving said authentication; and

generating said multimedia content output.

26. A method as recited in Claim 25 wherein said multimedia generating step comprises the following steps: 45

storing and delivering multimedia audio, graphics, text and timing data elements;

storing and delivering instructions which when executed synchronize the delivery of said multimedia data elements; and

executing said instructions to generate multimedia content output including audio output from said audio data element, text output from said text data element and graphics output from said graphics data element, said text output and said graphics output being displayed

on a display apparatus, the combination of which being delivered in a synchronized manner with said audio output in accordance with said timing data element.

5

27. A system for providing on-line multimedia content output to a user on said user's computer system, comprising:

10

browser means for providing access to a page and at least one component wherein said at least one component has multimedia audio, graphics, text and timing data elements and wherein said component further includes instructions which when executed synchronize the delivery of said multimedia data elements; downloading means for automatically downloading said at least one component to said user's computer system; and

15

execution means for executing said instructions to generate multimedia content output including audio output from said audio data element, text output from said text data element and graphics output from said graphics data element, said text output and said graphics output being configured to be displayed on a display apparatus, the combination of which being delivered in a synchronized manner with said audio output in accordance with said timing data element.

20

28. A system as recited in Claim 27 wherein said graphics output is in the form of highlights on said words which are configured to be displayed on a display apparatus in a synchronized manner with said audio output words in accordance with said timing element.

25

30

29. A system as recited in Claim 27 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length, said system further comprising:

35

40

45

output means for the simultaneous output of audio fragments and text fragments at the beginning of said delta time.

30

31. A server, comprising:

40

45

50

55

a storage unit configured to store a browser embedded component, including multimedia audio, graphics, text and timing data elements, instructions which when executed synchronize the delivery of said multimedia data elements; and an execution element configured to execute said instructions to generate multimedia content output including audio output from said audio data element, text output from said text data element and graphics output from said graphics data element, said text

32. A server as recited in Claim 31 wherein upon execution by said execution element, said graphics output is in the form of highlights on said words which are configured to be displayed on a display apparatus in a synchronized manner with said audio output words in accordance with said timing element.

33. A server as recited in Claim 31 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length wherein said execution element further comprises:

35

36. A generator configured to generate simultaneous output of audio fragments and text fragments at the beginning of said delta time.

37. A computer system, comprising:

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

612

613

614

615

616

617

618

619

620

621

622

623

624

625

626

627

628

629

630

631

632

633

634

635

636

637

638

639

640

641

642

643

644

645

646

647

648

649

650

651

652

653

654

655

656

657

658

659

660

661

662

663

664

665

666

667

668

669

670

671

672

673

674

675

676

677

678

679

680

681

682

683

684

685

686

687

688

689

690

691

692

693

694

695

696

697

698

699

700

701

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717

718

719

720

721

722

723

724

725

726

727

728

729

730

731

732

733

734

735

736

737

738

739

740

741

742

743

744

745

746

747

748

749

750

751

752

753

754

755

756

757

758

759

760

761

762

763

764

765

766

767

768

769

770

771

772

773

774

775

776

777

778

779

780

781

782

783

784

785

786

787

788

789

790

791

792

793

794

795

796

797

798

799

800

801

802

803

804

805

806

807

808

809

810

811

812

813

814

815

816

817

818

819

820

821

822

823

824

825

826

827

828

829

830

831

832

833

834

835

836

837

838

839

840

841

842

843

844

845

846

847

848

849

850

851

852

853

854

855

856

857

858

859

860

861

862

863

864

865

866

867

868

869

870

871

872

873

874

875

876

877

878

879

880

881

882

883

884

885

886

887

888

889

890

891

892

893

894

895

896

897

898

899

900

901

902

903

904

905

906

907

908

909

910

911

912

913

914

915

916

917

918

919

920

921

922

923

924

925

926

927

928

929

930

931

932

933

934

935

936

937

938

939

940

941

942

943

944

945

946

947

948

949

950

951

952

953

954

955

956

957

958

959

960

961

962

963

964

965

966

967

968

969

970

971

972

973

974

975

976

977

978

979

980

981

982

983

984

985

986

987

988

989

990

991

992

993

994

995

996

997

998

999

1000

output and said graphics output being configured for display on a display apparatus, the combination of which being delivered in a synchronized manner with said audio output in accordance with said timing data element. 5

35. A computer system as recited in Claim 34 wherein upon execution by said execution element, said graphics output is in the form of highlights on said words which are configured to be displayed on a display apparatus in a synchronized manner with said audio output words in accordance with said timing element. 10

36. A computer system as recited in Claim 34 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length wherein said execution element further comprises: 15

a generator configured to generate simultaneous output of audio fragments and text fragments at the beginning of said delta time. 20

37. A computer system as recited in Claim 34 wherein said browser embedded component is an applet. 25

38. A computer-readable medium having computer readable code stored therein, comprising: 30

a computer-readable code module configured to store multimedia audio, graphics, text and timing data elements and instructions which when executed synchronize the delivery of said multimedia data elements, and configured to execute said instructions to generate multimedia content output including audio output from said audio data element, text output from said text data element and graphics output from said graphics data element, said text output and said graphics output being configured for display on a display apparatus, the combination of which being delivered in a synchronized manner with said audio output in accordance with said timing data element. 35

39. A computer readable medium as recited in Claim 38 wherein said audio output when generated is in the form of a song having words. 40

40. A computer readable medium as recited in Claim 38 wherein said text output when executed is in the form of ASCII words. 45

41. A computer readable medium as recited in Claim 38 wherein said text output is in the form of Japanese characters. 50

42. A computer readable medium as recited in Claim 38 wherein said graphics output when executed is in the form of highlights on said text output which are configured to be displayed on a display apparatus in a synchronized manner with said audio output words in accordance with said timing element. 55

43. A computer readable medium as recited in Claim 38 wherein said graphics output when executed is in the form of a pachinko game having metal balls which is configured to be displayed on a display apparatus.

44. A computer readable medium as recited in Claim 38 wherein said audio output when executed resembles the sound of metals balls clanging, such audio output delivered in a synchronized manner with said graphics output in accordance with said timing element.

45. A computer readable medium as recited in Claim 38 wherein said audio data element is fragmented into audio fragments having delta time in length and wherein said text data element is fragmented into text fragments having delta time in length, said component further comprising:

an execution unit configured to provide the simultaneous output of audio fragments and text fragments at the beginning of said delta time.

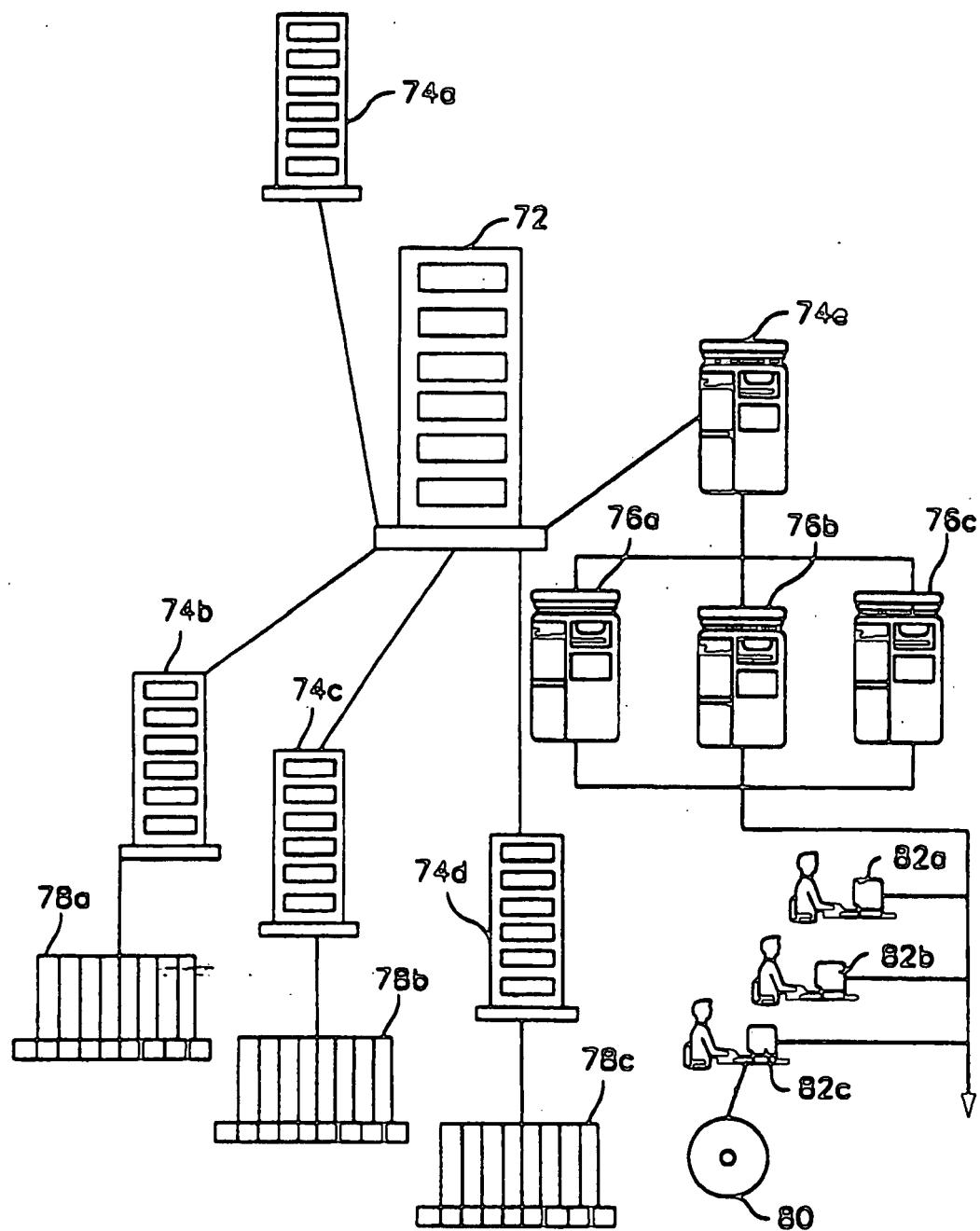


FIG. 1

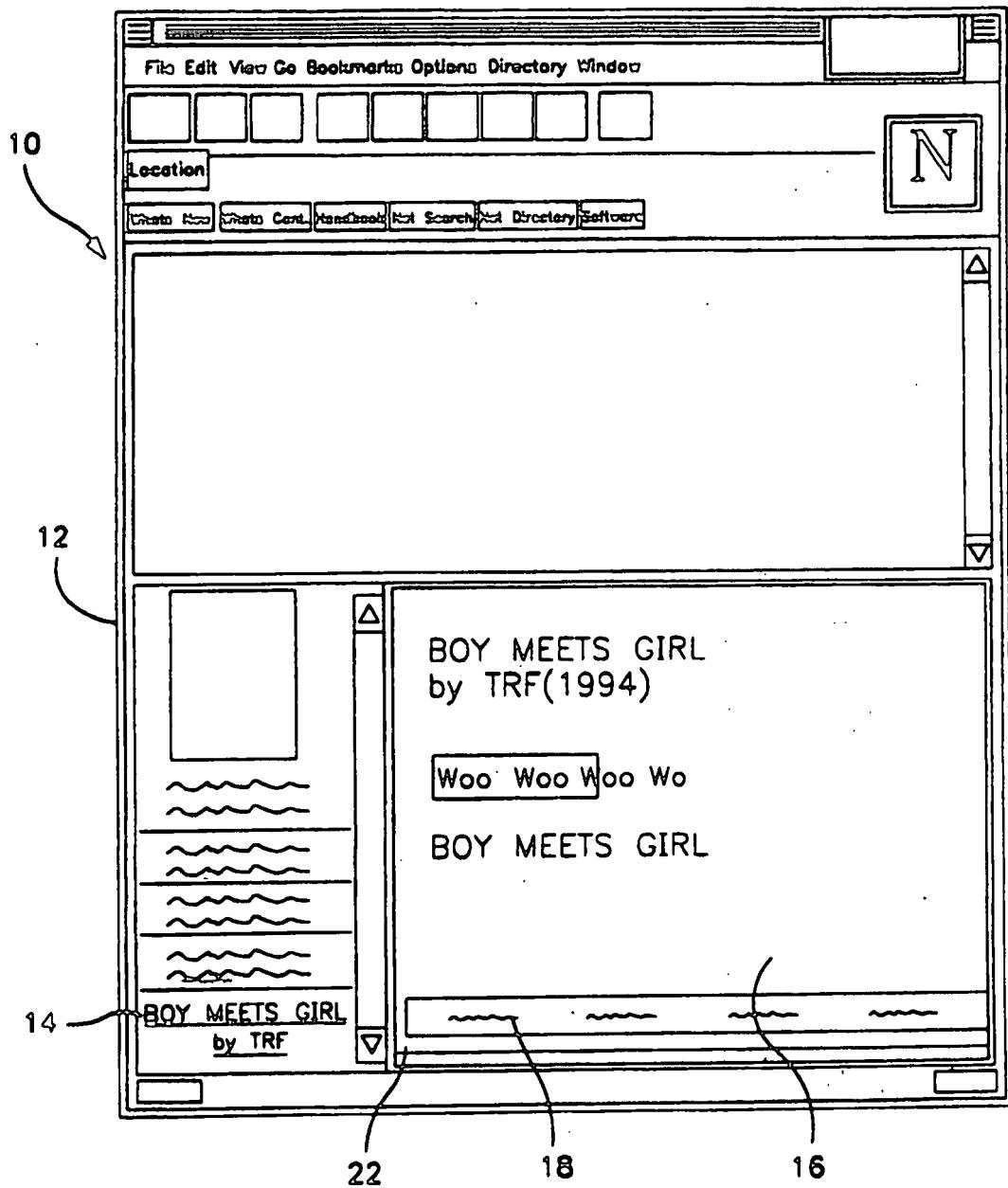


FIG. 2

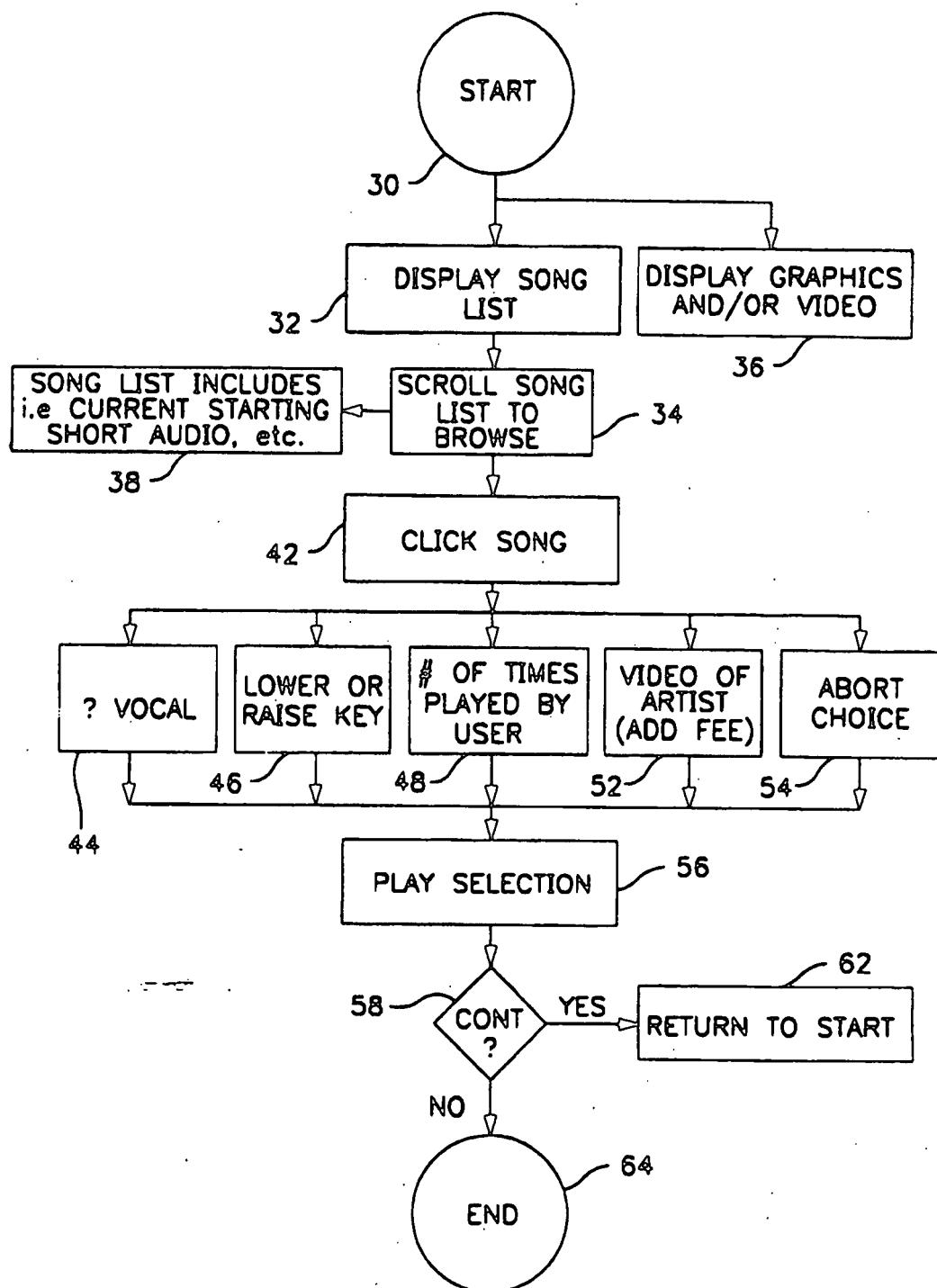


FIG. 3

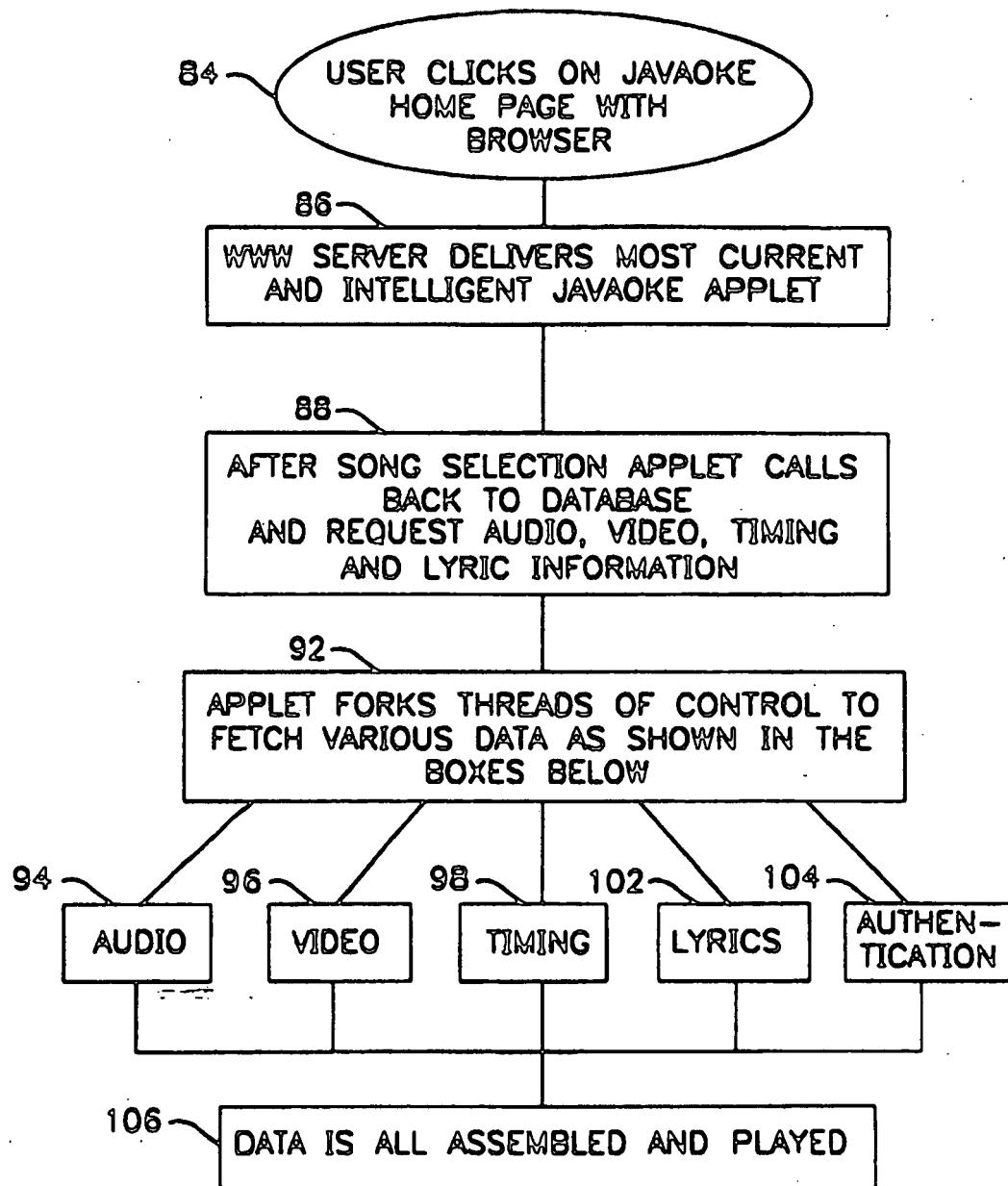


FIG. 4

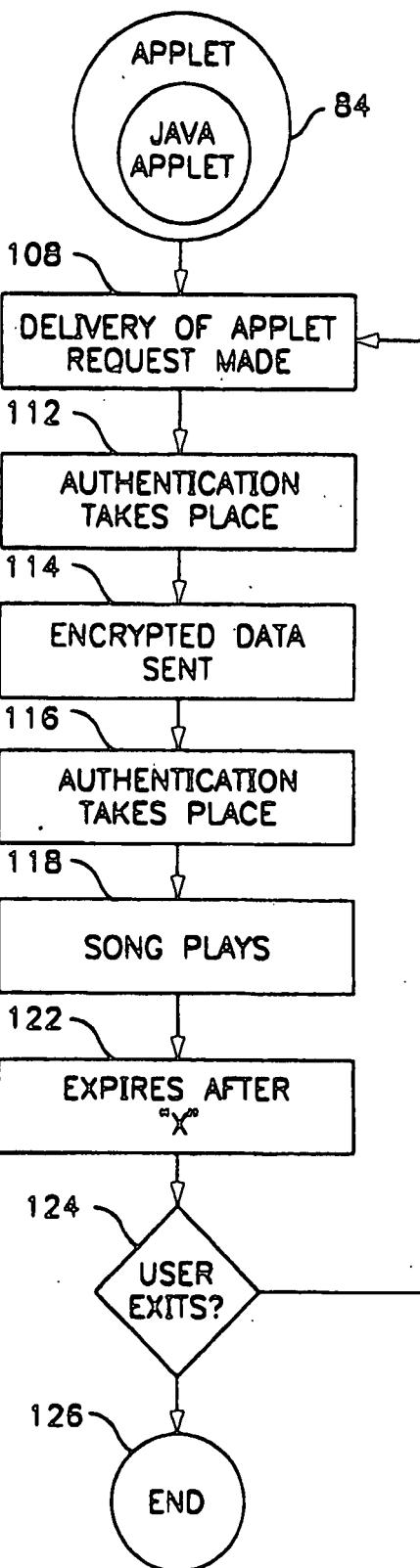


FIG. 5

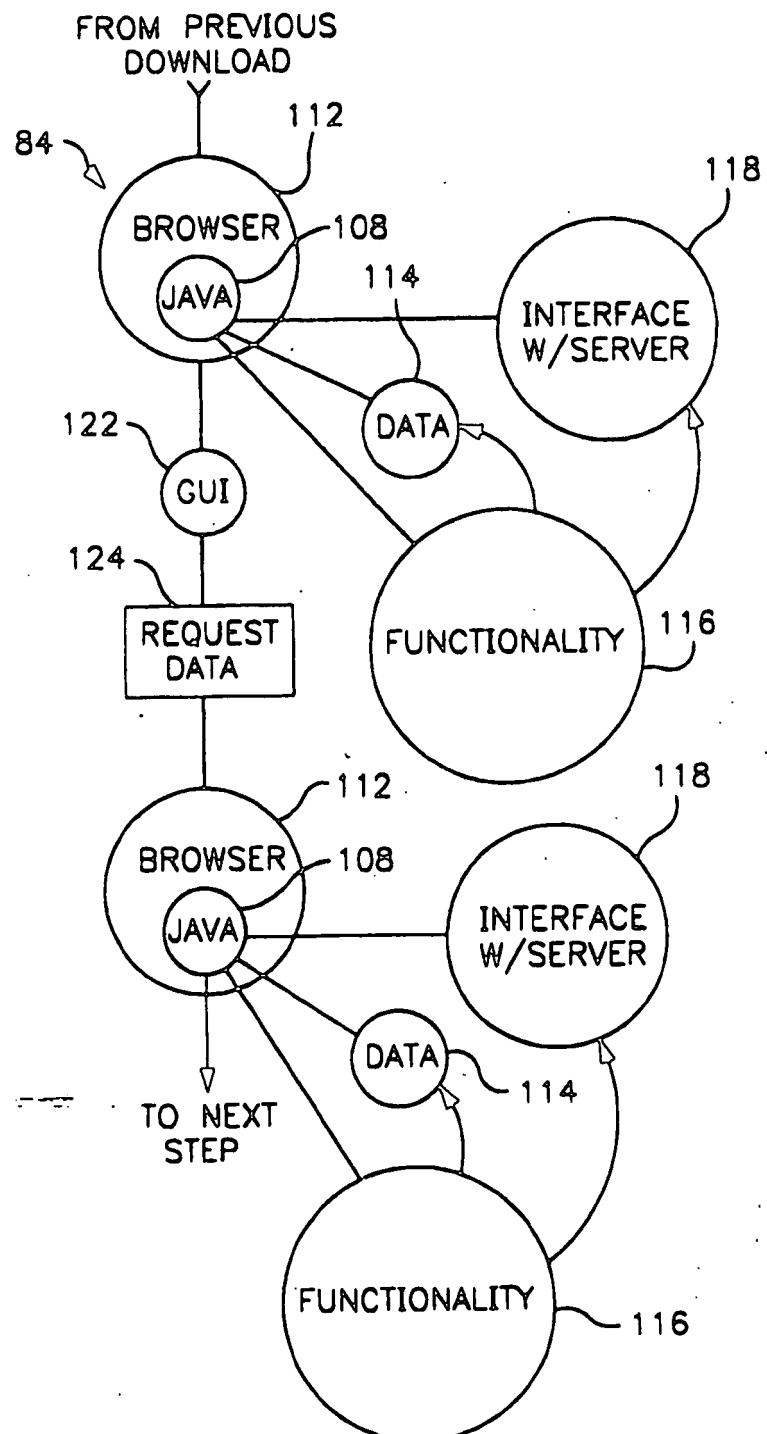


FIG. 6

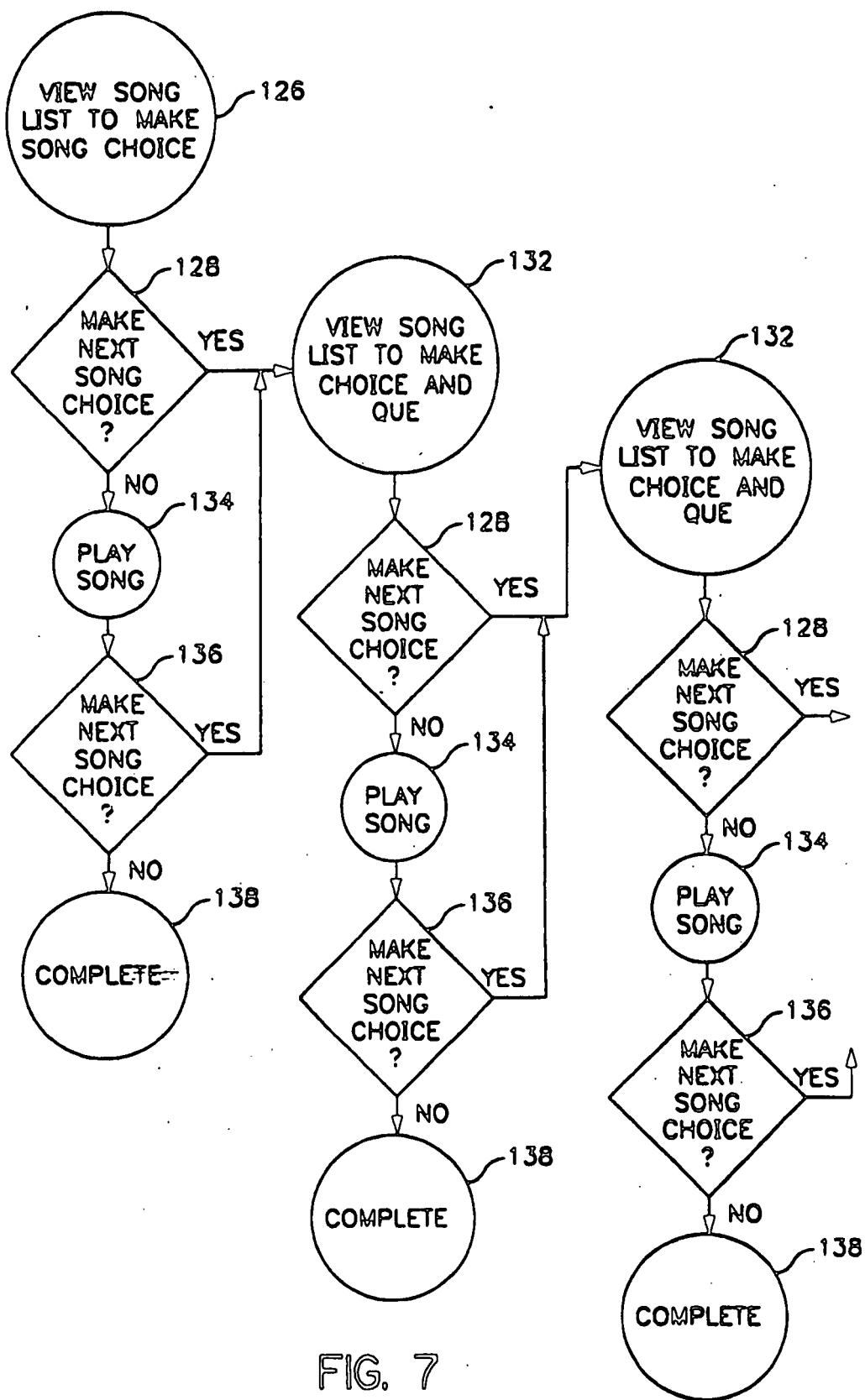


FIG. 7

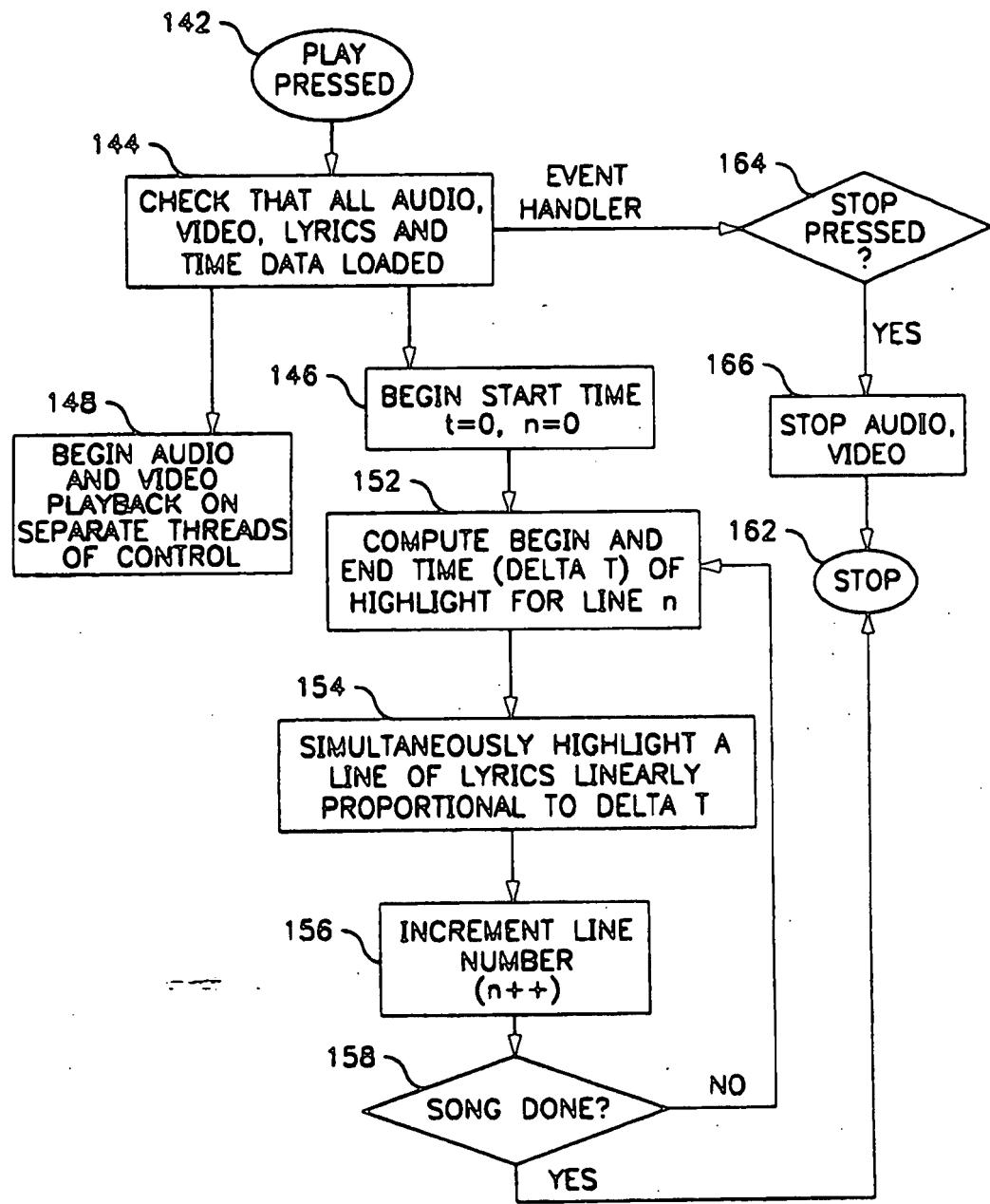


FIG. 8

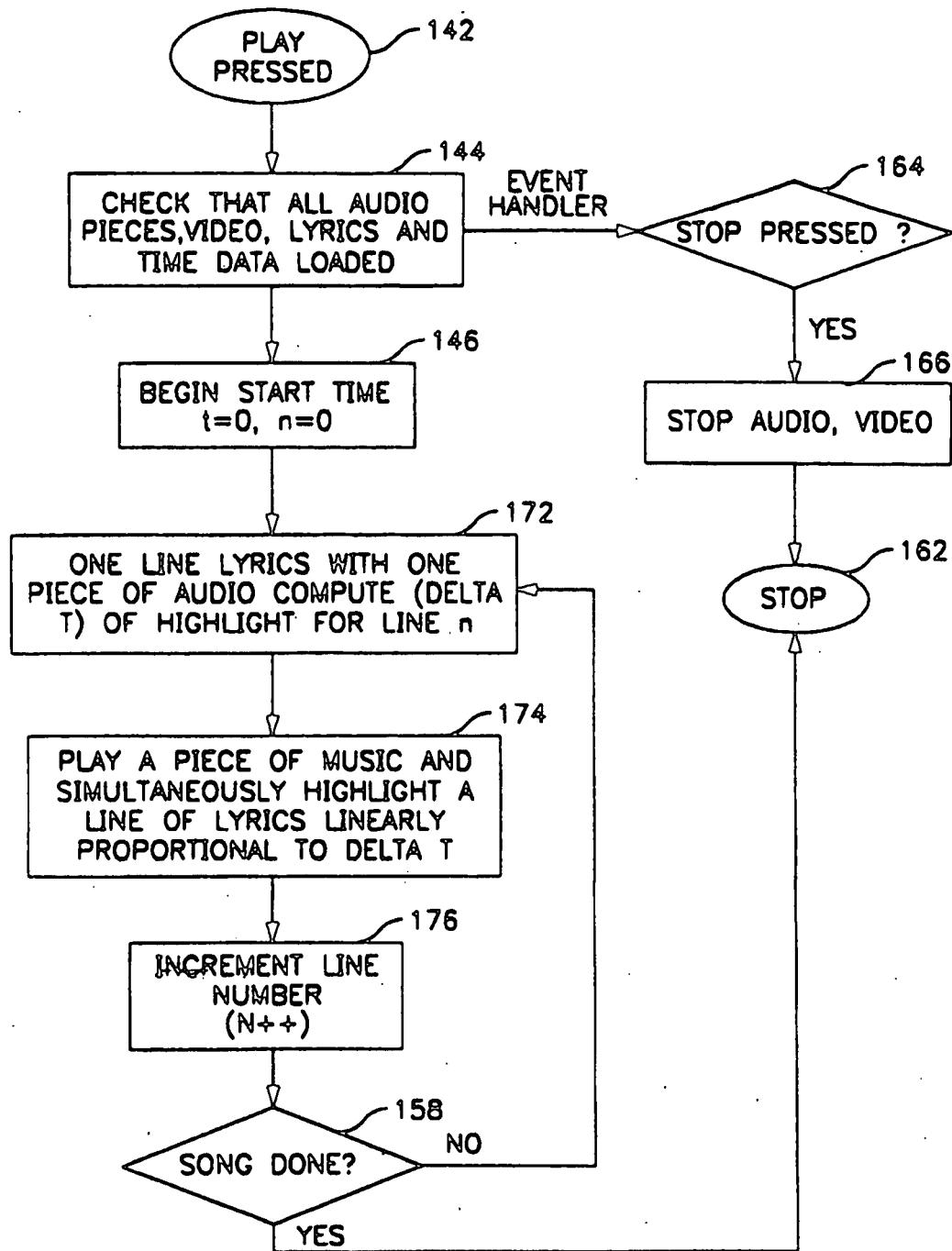


FIG. 9

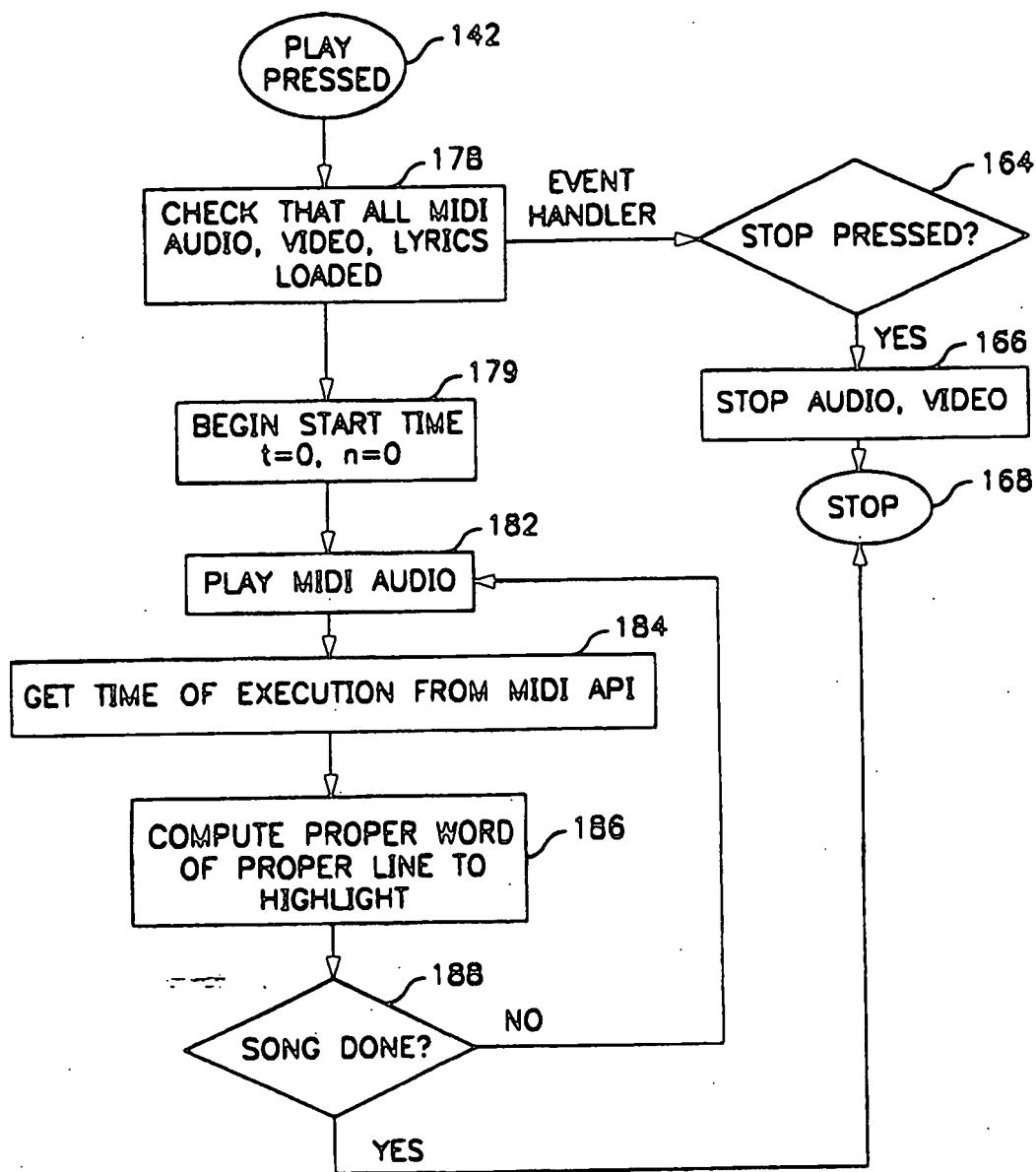


FIG. 10